

WHAT IS CLAIMED IS:

1. A device for inhibiting unintentional contact with the tip of a needle, said device comprising:
 - a housing having an interior cavity, a portion of said needle extending through said cavity and a tip of said needle located outside of said housing during use of said needle;
 - a pivoting member located within said cavity, said pivoting member defining a distal opening and a proximal opening, said openings sized to allow said needle to pass through said openings in said pivoting member; and
 - 10 means for canting said pivoting member into locking engagement with said needle to prevent removal of said needle from said housing when said needle tip is within said cavity and said needle is withdrawn from said distal opening of said pivoting member.
2. The device of Claim 1, wherein said openings are slightly larger than the diameter of said needle to permit said needle to move through said openings when said pivoting member is not canted.
3. The device of Claim 2, wherein said pivoting member comprises a U-shaped member having a proximal wall that defines said proximal opening and a distal wall that defines said distal opening.
- 20 4. The device of Claim 3, wherein said pivoting member further defines a slot communicating with said distal opening, said slot having a dimension that is smaller than said distal opening.
5. The device of Claim 4, wherein said slot extends to an upper edge of said distal wall.

6. The device of Claim 3, wherein said canting means causes said proximal wall to cant about said needle when said needle is withdrawn from said distal opening of said pivoting member.

7. The device of Claim 6, wherein said proximal wall binds said
5 needle to prevent further movement of said needle.

8. The device of Claim 7, wherein said canting means comprises a spring disposed within said interior cavity of said housing to bias said pivoting member to cant about said needle.

9. The device of Claim 8, wherein said needle and said device are
10 used in combination with a catheter.

10. The device of Claim 9, wherein said device is attached at a proximal end of said catheter.

11. A device for inhibiting unintentional contact with the tip of a needle, said device comprising:

15 a housing having an interior cavity, a portion of said needle extending through said cavity and a tip of said needle located outside of said housing during use of said needle;

20 a pivoting member located within said cavity, said pivoting member defining a distal opening and a proximal opening, said openings sized to allow said needle to pass through said pivoting member;

said pivoting member further defining a slot communicating with said distal opening and having a dimension that is insufficient to permit forward movement of said needle therethrough; and

25 means for canting said pivoting member into locking engagement with said needle to prevent removal of said needle from said housing when said

needle tip is within said cavity and said needle is withdrawn from said distal opening of said pivoting member.

12. The device of Claim 11, wherein said needle further comprises a wire guide in a lumen thereof and said slot has a dimension that is sufficient to
5 allow said wire guide to pass therethrough.

13. The device of Claim 12, wherein said canting means causes said pivoting member to cant about said needle when said needle is withdrawn from said distal opening of said pivoting member.

14. The device of Claim 13, wherein said canting means positions
10 said slot to permit said wire guide to exit said housing when said pivoting member is canted.

15. The device of Claim 14, wherein said canting means comprises a spring disposed within said interior cavity of said housing to bias said pivoting member to cant about said needle.

16. A device for inhibiting intentional contact with the tip of a
needle, said device comprising:

a housing having an interior cavity, a portion of said needle extending through said cavity and a tip of said needle located outside of said housing during use of said needle;

20 a pivoting member located within said cavity, said pivoting member having a proximal wall with a proximal opening therein and a distal wall with a distal opening therein, said openings sized to allow said needle to pass through said walls;

said distal wall further defining a slot communicating with said distal opening and having a dimension that is insufficient to permit forward movement of said needle therethrough; and

5 a spring disposed in said interior cavity of said housing to cant said proximal wall about said needle to prevent further movement of said needle when said needle tip is within said cavity and said needle is withdrawn from said distal opening of said distal wall.

10 17. The device of Claim 16, wherein the diameters of said openings are slightly larger than the diameter of said needle to permit said needle to move through said openings when said pivoting member is not canted.

18. The device of Claim 17, wherein said openings are circular and coaxial.

19. The device of Claim 16, wherein said proximal and distal walls are perpendicularly attached to a base wall to form a U-shaped pivoting member.

15 20. A device for inhibiting unintentional contact with the tip of a needle, said device comprising:

a housing having an interior cavity, a portion of said needle extending through said cavity and a tip of said needle located outside of said housing during use of said needle;

20 a pivoting member located within said cavity, said pivoting member defining a distal opening and a proximal opening, said openings sized to allow said needle to pass through said openings in said pivoting member; and

25 means for canting said pivoting member about said needle and for preventing further movement of said needle when said needle tip is within said cavity and said needle is withdrawn from said distal opening of said pivoting member.

21. The device of Claim 20, wherein said openings are slightly larger than the diameter of said needle to permit said needle to move through said openings when said pivoting member is not canted.

22. The device of Claim 21, wherein said pivoting member comprises
5 a U-shaped member, a proximal wall that defines said proximal opening attached to a proximal end of said U-shaped member, and a distal wall that defines said distal opening attached to a distal wall of said U-shaped member.

23. The device of Claim 22, wherein said pivoting member further defines a slot communicating with said distal opening, said slot having a dimension
10 that is smaller than said distal opening.

24. The device of Claim 23, wherein said slot extends to an upper edge of said distal wall.

25. The device of Claim 22, wherein said canting means causes said proximal wall to cant about said needle when said needle is withdrawn from said
15 distal opening of said pivoting member.

26. The device of Claim 25, wherein said canting means binds said needle to prevent further movement of said needle when said proximal wall is canted about said needle.

27. The device of Claim 26, wherein said canting means comprises
20 a spring at least partially disposed within a groove located on said pivoting member to bias said pivoting member to cant about said needle.

28. The device of Claim 27, wherein said spring defines an opening for said needle to pass therethrough.

29. The device of Claim 28, wherein said spring bites into said needle to prevent its further forward or rearward movement when said proximal wall is canted about said needle.

30. The device of Claim 29, wherein said needle and said device are
5 used in combination with a catheter.

31. The device of Claim 30, wherein said device is attached at a proximal end of said catheter.

32. A device for inhibiting unintentional contact with the tip of a needle, said device comprising:

10 a housing having an interior cavity, a portion of said needle extending through said cavity and a tip of said needle located outside of said housing during use of said needle;

15 a pivoting member located within said cavity, said pivoting member defining a distal opening and a proximal opening, said openings sized to allow said needle to pass through said pivoting member;

said pivoting member further defining a slot communicating with said distal opening and having a dimension that is insufficient to permit forward movement of said needle therethrough; and

20 means for canting said pivoting member about said needle and for preventing further movement of said needle when said needle tip is within said cavity and said needle is withdrawn from said distal opening of said pivoting member.

25 33. The device of Claim 32, wherein said needle further comprises a wire guide in a lumen thereof and said slot has a dimension that is sufficient to allow said wire guide to pass therethrough.

34. The device of Claim 33, wherein said canting means causes said pivoting member to cant about said needle when said needle is withdrawn from said distal opening of said pivoting member.

35. The device of Claim 34, wherein said canting means positions
5 said slot to permit said wire guide to exit said housing through said slot when said pivoting member is canted.

36. The device of Claim 35, wherein said canting means comprises a spring at least partially disposed within a groove located on said pivoting member to bias said pivoting member to cant about said needle.

10 37. The device of Claim 36, wherein said spring defines an opening for said needle to pass therethrough.

38. The device of Claim 37, wherein said spring bites into said needle to prevent its further forward or rearward movement when said proximal wall is canted about said needle.

15 39. A device for inhibiting intentional contact with the tip of a needle, said device comprising:

a housing having an interior cavity, a portion of said needle extending through said cavity and a tip of said needle located outside of said housing during use of said needle;

20 a pivoting member located within said cavity, said pivoting member having a proximal wall with a proximal opening therein and a distal wall with a distal opening therein, said openings sized to allow said needle to pass through said walls;

said distal wall further defining a slot communicating with said distal opening and having a dimension that is insufficient to permit forward movement of said needle therethrough; and

a spring disposed in said interior cavity of said housing and defining
5 an opening for permitting said needle to pass therethrough, a portion of said spring being canted about said needle when said needle tip is within said cavity and said needle is withdrawn from said distal opening of said distal wall of said pivoting member in order to bind said needle to prevent further movement of said needle.

40. The device of Claim 39, wherein the diameters of said openings
10 are slightly larger than the diameter of said needle to permit said needle to move through said openings when said proximal wall is not canted.

41. The device of Claim 40, wherein said openings are circular and coaxial.

42. The device of Claim 41, wherein said pivoting member comprises
15 a U-shaped member, said proximal wall being attached to a proximal end of said U-shaped member and said distal wall being attached to a distal end of said U-shaped member.

43. The device of Claim 42, wherein a groove is defined by said proximal wall and said U-shaped member.

20 44. The device of Claim 43, wherein said spring is at least partially disposed within said groove such that said opening of said spring is generally aligned with said proximal opening of said proximal wall of said pivoting member to permit said needle to pass through both said proximal opening and said opening of said spring.

45. The device of Claim 44, wherein said spring biases said pivoting member to cant about said needle.

46. The device of Claim 45, wherein said spring bites into said needle to prevent its further forward or rearward movement when said proximal
5 wall is canted about said needle.

47. A device for inhibiting intentional contact with the tip of a needle, said device comprising:

a housing having an interior cavity, a portion of said needle extending through said cavity and a tip of said needle located outside of said
10 housing during use of said needle;

a pivoting member located within said cavity, said pivoting member having a proximal wall with a proximal opening therein and a distal wall with a distal opening therein, said openings sized to allow said needle to pass through said walls;

15 said distal wall further defining a slot communicating with said distal opening and having a dimension that is insufficient to permit forward movement of said needle therethrough; and

20 a compressible member at least partially disposed between said needle and said pivoting member and compressed therebetween when said needle tip is located outside of said housing during use of said needle.

48. The device of Claim 47, wherein the diameters of said openings are slightly larger than the diameter of said needle to permit said needle to move through said openings when said proximal wall is not canted.

49. The device of Claim 48, wherein said openings are circular and
25 coaxial.

50. The device of Claim 49, wherein said pivoting member comprises a base, said proximal wall being attached to a proximal end of said base, and said distal wall being attached to a distal end of said base.

51. The device of Claim 50, wherein said compressible member is at least partially disposed within an opening in said base of said pivoting member.

52. The device of Claim 51, wherein said compressible member biases said pivoting member to cant about said needle.

53. The device of Claim 52, wherein said proximal wall bites into said needle to prevent its further forward or rearward movement when said proximal wall is canted about said needle.

54. The device of Claim 52, wherein said compressible member comprises a head portion disposed on said base of said pivoting member, said head portion sized so that said head portion cannot be inserted in said opening of said pivoting member.

55. The device of Claim 54, wherein said compressible member further comprises a body portion that is integrally formed with said head portion and that fits snugly in said opening of said pivoting member.

56. The device of Claim 55, wherein said compressible member further comprises a channel that extends longitudinally through said compressible member.

57. The device of Claim 56, wherein said compressible member is formed from a material that is characterized by a durometer measurement that is on the order of approximately 80A.

58. The device of Claim 57, wherein said proximal wall comprises a rounded edge that prevents said proximal wall from biting into an interior wall of said interior cavity of said housing such that said pivoting member is immobilized when said proximal wall is canted about said needle.

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